



Department of Energy

Brookhaven Site Office

P.O. Box 5000

Upton, New York 11973

APR 20 2018

Mr. Brian Jankauskas
New York State Department of
Environmental Conservation
Division of Environmental Remediation
625 Broadway – 12th Floor
Albany, New York 12233

Ms. Jessica Mollin
Federal Facilities Section
U.S. EPA - Region II
290 Broadway – 20th Floor
New York, New York 10007-1866

Dear Mr. Jankauskas and Ms. Mollin:

SUBJECT: BROOKHAVEN NATIONAL LABORATORY (BNL) PER-FLUORINATED
COMPOUNDS (PFCs) CHARACTERIZATION WORK PLAN – RESPONSE TO
COMMENTS

We have reviewed the New York State Department of Environmental Conservation April 9, 2018 comments to BNL's Work Plan for the Characterization of Per-Fluorinated Compounds in Groundwater within Source Water Contributing Areas of BNL Supply Wells. A table summarizing our responses is attached.

If you have any questions please call Jerry Granzen, of my staff, at (631) 344-4089.

Sincerely,

Robert P. Gordon
Acting Site Manager

Attachment:
Responses to NYSDEC Comments Table

cc: J. Swartwout, NYSDEC, w/o att.
T. Papura, NYSDEC, w/o att.
D. O'Hehir, NYSDOH, w/o att.
J. Collins, NYSDOH, w/o att.
S. Karpinski, NYSDOH, w/att.
A. Juchatz, SCDHS, w/o att.

A. Rapiejko, SCDHS, w/att.
G. Granzen, SC-BHSO, w/o att.
W. Dorsch, BSA, w/o att.
R. Howe, BSA, w/o att.
J. Remien, BSA, w/o att.

BNL Groundwater Protection Group
*Responses to NYSDEC Comments on Work Plan for Characterization of PFCs in Groundwater
Within Source Water Contributing Areas of BNL Supply Wells*

Comment Number	Section	Comment	Response
Letter from Brian Jankauskas, NYSDEC to Robert Gordon, USDOE April 9, 2018.			
1	Background, second paragraph and Figure 1	This discussion presents three areas where Per- and Polyfluoroalkyl Substances (PFAS) were used at Brookhaven National Laboratory (BNL) as Aqueous Film-forming Foam (AFFF). Figure 1 also identifies a Fire Department located at the facility. Focused Investigations must be performed at each location to evaluate PFAS within the environment.	<p>This Work Plan focuses on the source water contributing areas for BNL's five active supply wells. This effort was given priority because of potential impacts to supply well operations and the need to take possible remedial actions. Because one documented release site (the 1970 Foam Test Site) and one suspected release site (the BNL Firehouse) are located within the two-year capture zone/contributing area of the supply wells, temporary wells will be installed downgradient of these areas. PFC-GP-2 and PFC-GP-4 will be installed immediately downgradient of the Firehouse. PFC-GP-5 will be installed immediately downgradient of the 1970 test area, and PFC-GP-11 will be installed between the test area and nearby supply well 10.</p> <p>Once this effort has been completed, additional groundwater sampling will be conducted closer to the former Bubble Chamber area and at the Major Petroleum Facility using currently available permanent wells and/or new temporary wells. BNL is in the process of searching for records that may help focus the groundwater investigation to specific release sites in these areas.</p>
2	Background, second paragraph.	Suggest indicating where AFFF is/was stored at BNL.	A discussion on where AFFF is/was currently stored will be included in the final report.
3	AFFF Survey	The AFFF survey completed by Brookhaven national Laboratory, dated	Once the updated records search on historical AFFF storage/release areas has been completed, BNL/DOE

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Comment Number	Section	Comment	Response
		July 13, 2016, should be updated to include the three locations discussed within the Background section.	will update the survey form as appropriate and submit to NYSDEC.
4	Scope of Work, second paragraph.	Verify that the sample locations indicated (PFC-GP-5) match Figure 1 (GP-05). Suggest indicating that Phase 2 will include the remaining locations.	In the text of the work plan, the proposed Geoprobe installation sites are referred to as the full site ID (e.g., PFC-GP-5), and a shorter version of the site ID are used for the map (e.g., GP-05). In future submittals, references to site IDs will be more consistent to avoid confusion.
5	Sample Collection, first paragraph.	Suggest including a copy of EM-SOP-311 as an appendix.	Although internal SOPs are not normally attached to work plans that will be conducted by trained BNL personnel, we will consider adding the procedure as an appendix in any follow-up work plans.
6	Sample Collection, third paragraph.	Verify that the analysis method is performed by isotope dilution, which is generally known as modified Method 537.	The analysis method is performed by isotope dilution.
7	Sample Collection, third paragraph.	Suggest requesting analysis of full list (approximately 20 PFAS chemicals) instead of the UCMR3 six. This will provide additional information regarding PFAS within the groundwater and if more than one plume is present.	All samples will be analyzed for the contract laboratory's "standard list", which includes 21 compounds.
8	Sample Collection, third paragraph.	Suggest indicating that Category B deliverable will be provided and a Data Usability Summary Report will be prepared.	A full (Category B) data package will be provided by the analytical laboratory. A quality assurance summary will be included with the final report.
9	Decontamination and Cross Contamination	Verify that Trizma will be provided and that bottles will be polypropylene	The sample bottles supplied by the contract analytical laboratory will be polypropylene, and will contain

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Comment Number	Section	Comment	Response
	Prevention Procedures, Item 8.	instead of HDPE.	Trizma.
10	Supply Wells	Will PFAS samples be obtained during this investigation?	The regulatory required 2018 Minimum Monitoring Requirements for BNL's drinking water supply wells now require quarterly sampling for perfluorinated compounds including PFOS, PFOA, PFNA, PFHpA, PFHxS, and PFBS. No additional potable supply well samples will be collected as part of this work plan. However, PFAS data from the supply well monitoring program will be summarized in the final report.
11	Table 5	Suggest including the reporting limits.	The reporting limits will be included in the final report.